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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,356	04/02/2004	Egbert Woelk	51898	9788
75	90 02/21/2006		EXAMINER	
S. Matthew Cairns			SMOOT, STEPHEN W	
EDWARDS & ANGELL, LLP P.O. Box 55874			ART UNIT	PAPER NUMBER
Boston, MA 02205			2813	
			DATE MAN ED 02/21/2004	,

DATE MAILED: 02/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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	Application No.	Applicant(s)				
	10/816,356	WOELK ET AL.				
Office Action Summary	Examiner	Art Unit				
	Stephen W. Smoot	2813				
The MAILING DATE of this communication ap Period for Reply	opears on the cover sheet with the c	correspondence address				
A SHORTENED STATUTORY PERIOD FOR REP WHICHEVER IS LONGER, FROM THE MAILING I - Extensions of time may be available under the provisions of 37 CFR 1 after SIX (6) MONTHS from the mailing date of this communication. If NO period for reply is specified above, the maximum statutory period. Failure to reply within the set or extended period for reply will, by statu Any reply received by the Office later than three months after the mail earned patent term adjustment. See 37 CFR 1.704(b).	DATE OF THIS COMMUNICATION .136(a). In no event, however, may a reply be timed will apply and will expire SIX (6) MONTHS from the course the application to become ABANDONE	N. nely filed the mailing date of this communication. D (35 U.S.C. § 133).				
Status						
1) Responsive to communication(s) filed on 02 April 2004 and 06 January 2006.						
2a) ☐ This action is FINAL. 2b) ☒ Th	b)⊠ This action is non-final.					
•	• • • • • • • • • • • • • • • • • • • •					
closed in accordance with the practice under	Ex parte Quayle, 1935 C.D. 11, 45	53 O.G. 213.				
Disposition of Claims						
4)⊠ Claim(s) <u>1-11</u> is/are pending in the application.						
4a) Of the above claim(s) 7-11 is/are withdrawn from consideration.						
5) Claim(s) is/are allowed.						
6)⊠ Claim(s) <u>1-6</u> is/are rejected.						
7) Claim(s) is/are objected to.						
8) Claim(s) are subject to restriction and	or election requirement.					
Application Papers		,				
9)⊠ The specification is objected to by the Examir	ner.					
10) The drawing(s) filed on is/are: a) ac	cepted or b) objected to by the l	Examiner.				
Applicant may not request that any objection to th	e drawing(s) be held in abeyance. See	e 37 CFR 1.85(a).				
Replacement drawing sheet(s) including the corre						
11)☐ The oath or declaration is objected to by the €	Examiner. Note the attached Office	e Action or form PTO-152.				
Priority under 35 U.S.C. § 119						
12) ☐ Acknowledgment is made of a claim for foreig	n priority under 35 U.S.C. § 119(a))-(d) or (f).				
1. Certified copies of the priority docume	nts have been received.					
2. Certified copies of the priority docume		ion No				
3. ☐ Copies of the certified copies of the pri	• •					
application from the International Bure	au (PCT Rule 17.2(a)).					
* See the attached detailed Office action for a list of the certified copies not received.						
Attachment(s)	_					
1) M Notice of References Cited (PTO-892) 2) Motice of Draftsperson's Patent Drawing Review (PTO-948)	4) Interview Summary Paper No(s)/Mail Da					
 Notice of Draftsperson's Patent Drawing Review (PTO-948) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/0: Paper No(s)/Mail Date 4-2-04; 5-11-05. 		Patent Application (PTO-152)				

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DETAILED ACTION

This Office action is in response to application papers filed on 02 April 2004 and to applicant's election filed on 06 January 2006.

Election/Restrictions

1. Applicant's election without traverse of group I, claims 1-6 in the reply filed on 06 January 2006 is acknowledged.

Claims 7-11 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Information Disclosure Statement

2. The lined through document in the IDS filed on 02 April 2004 has not been considered because a copy of this British patent document is not present in the file of record.

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Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Method of Depositing a Film Containing

Germanium on a Substrate Using Two or More Gaseous Germanium Compounds.

5. The disclosure is objected to because of the following informality: The disclosure contains an inconsistency with respect to the germanium compound formulations. It is not clear from the applicant's disclosure if R³ can include hydrogen (H). For example, page 3, lines 10-11 indicates that R³ can be H, while page 3, lines 14-15 indicates that R³ cannot be H. This inconsistency appears throughout the disclosure including the "Summary of the Invention" (see pages 3-5) and the "Detailed Description of the Invention" (see pages 6-7).

Appropriate correction is required.

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Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because it is not clear if R³ can include H as claimed in line 7 or if R³ cannot include H as claimed in line 11; and

Claims 2-6 are rejected under 35 U.S.C. 112, second paragraph, because they depend on claim 1.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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9. Claims 1-2, 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Mukai (US 5.120,394 – from applicant's IDS filed on 4-2-04).

As best understood by the examiner, claim 1 is being interpreted to mean that R³ can be hydrogen (H).

Referring to column 6, lines 18-45, Mukai discloses a chemical vapor deposition method of forming a germanium single crystal layer on a silicon substrate that uses a combination of GeH₄ and GeF₄ as source gases. The applicant's as-claimed first germanium compound can be GeF₄, that is when a=o and X¹ is F. The applicant's second as-claimed germanium compound can be GeH₄, that is when b'=4.

These are all of the limitations set forth in claim 1 of the applicant's invention. Regarding claim 2, the two germanium source gases are mixed together and fed into a reaction chamber through a spray end portion of an inlet pipe as described in column 6, lines 34-40. Regarding claim 6, R³ can also be hydrogen, in which case GeH₄ can correspond to b'=1 and d'=3 or b'=d'=2.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Toyoda et al. teach a method of forming a SiGeC layer that uses germane as the germanium source gas and can use methylgermane as a carbon source gas. Joo et al. teach an epitaxial growth method that uses chlorine-containing germanium source gases.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen W. Smoot whose telephone number is 571-272-1698. The examiner can normally be reached on M-F (8:00 am to 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr. can be reached on 571-272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SWS

STÉPHEN W. SMOOT PRIMARY EXAMINER